

CLAIMS

1. A substantially laterally pressure-loaded panel, the side aspect ratio of which is at least 1.5 and which is composed at least of two reinforcement layers of substantially parallel fibres, i.e. unidirectional reinforcement layers, the predominant orientations of said reinforcement layers forming an angle with the sides of the panel, characterised in that in the unidirectional reinforcement layer the angle between the predominant fibre orientation and the longer side of the panel is approx. $\pm 55^\circ$ - $\pm 75^\circ$ and that approximately one half of the unidirectional reinforcement layers used in the panel forms a desired +-angle with the longer side of the panel and approximately the other half forms a desired - -angle with the longer side of the panel.
2. A pressure-loaded panel in accordance with claim 1, characterised in that the angle between the predominant fibre orientation of the unidirectional reinforcement layer and the longer side of the panel is approx. $\pm 58^\circ$ - $\pm 65^\circ$ and that approximately one half of the unidirectional reinforcement layers used in the thickness of the panel forms a desired +-angle with the longer side of the panel and correspondingly, the other half forms a desired —angle with the longer side of the panel.
3. A pressure-loaded panel in accordance with claim 1, characterised in that the angle between the predominant fibre orientation of the unidirectional reinforcement layer and the longer side of the panel is approx. $\pm 60^\circ$ and that approximately one half of the unidirectional reinforcement layers used in the thickness of the panel forms a desired +-angle with the longer side of the panel and correspondingly, the other half forms a desired —angle with the longer side of the panel.
4. A pressure-loaded panel in accordance with any of claims 1-3, characterised in that a substantial part of the thickness of the panel and preferably 60 – 100 % and more preferably over 70 % of the thickness of the panel is formed of reinforcement layers that are substantially comprised of unidirectional fibres, i.e. unidirectional reinforcement layers, the predominant orientations of said reinforcement layers forming with the longer

side of the panel an angle of approximately $\pm 55^\circ$ - 75° , preferably approximately $\pm 58^\circ$ - 65° , more preferably approximately $\pm 60^\circ$ and that approximately one half of the unidirectional reinforcement layers used in the panel thickness forms a desired \pm -angle with the longer side of the panel and correspondingly, approximately the other half forms a desired \pm -angle with the longer side of the panel.

5 5. A pressure-loaded panel in accordance with any of claims 1-4, **characterised** in that at least two of the reinforcement layers of the panel are attached to each other by stitching whereby these two layers form a multi-axial reinforcement.

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6. A pressure-loaded panel in accordance with claim 6, **characterised** in that an essential part of the thickness of the panel, preferably 60-100 %, more preferably over 70 % of the thickness of the panel is formed of reinforcement layers of multi-axial reinforcements.

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7. A laterally pressure-loaded panel in accordance with any of the preceding claims, **characterised** in that it is manufactured substantially of fibres made of E-glass.

8. Use of a laterally pressure-loaded panel in accordance with any of claims 1-7 in
20 boat and/or shipbuilding.

9. Use of a laterally pressure-loaded panel in accordance with any of claims 1-7 in tanks, pressure vessels and in other corresponding structures that are subjected to a lateral pressure load.